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Correspondence from practical farmers, giving the results of their experiments, is solicited. Letters which will be printed or not, as the writer may wish.

The PLOUGHMAN offers great advantages to advertising. Its circulation is large and among the most active and intelligent portion of the community.

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Agricultural.

Changes in Farm Life.

Within a few years have come certain changes in the life of those on the farm which seems to make the farm less isolated, and the life more social. First and chief among these we would name the establishment of the order of Patrons of Husbandry which unites the farmers and their families for social gatherings and for mutual comparison of methods and results, as well as for union against those who would take advantage of a single farmer as they cannot of a combination. When they are united and meet regularly, the prices at which one buys his implements, fertilizers, seeds, or whatever he may need, or the prices at which he sells his products are known to all, and while all may not obtain the same figures, as all may not offer the same quality, there is less chance of some selling for a price below the market value, because they do not know what other buyers offer or other growers are asking. All this is important to the farmer's pocketbook or bank account, and if those are not the all-important things, they are very necessary, that he should feel himself on an equality with his fellow-men in other business.

The social feature, however, is not less important. The farmer with a few acres meets the man with a thousand acres or more as an equal. It may even happen that his smaller area more intensive cultivation and closer observation may have fitted him to teach the man with more acres and larger flocks and herds, who has not got down so closely to the study of nature and nature's laws.

Nor is this all. When men meet in the advancement of the same great objects they devote thought to it, and are prepared to discuss it. The man who is naturally reticent, or who is not willing to talk because he fears that he may display a deficiency of early education or of oratorical powers, may become so interested that he will forget all of that, when he thinks he has learned something new, or has a decided opinion that he wishes to advocate, while the voluble and fluent talker may be led to keep quiet at least until he has given the subject a little thought and a little study. One of the most eloquent speakers we ever heard at an agricultural meeting would talk an hour, and there would not be many ideas in all he said as there is nourishment in a glass of soda water. It might be sweet flavored, but it was nothing but foam.

We have heard another who made no pretensions to eloquence and whose pronunciation and grammar were far from being up to the standard, but whose whole speech was as full of the plain statements of facts as the multiplication table. To leave out one line was to make a serious break in the whole. The other might have all been left out, excepting the notes which marked "laughter" and "applause." The Grange then makes the modest men more self-assured and confident, and is apt to reduce the self-conceit of some others. And more, it does for the women and for the younger people what it is doing for the older ones. It keeps them interested, too, in the work of the farm, while it is training them for a possible public life in the future, when the farmers will not think it is necessary to send a lawyer or a minister to represent them at the State House or in Congress, because "a farmer cannot talk with the other men."

Having mentioned the Grange and its improving influence we can now add to it the telephone, so convenient not only for keeping him in close communication with his markets where he has to sell, or where he buys, but as neighbor with neighbor; with the physician or surgeon if they are needed; with police and fire department, calling help perhaps when one could not even get to harness the horse, much less to ride or drive any distance. We hope that we may live to see nearly every farmhouse connected with others and with central stations. Suppose that there may be some idle gossip going on over the lines at times. Few can stand the test of being always preaching or lecturing, seeking for or giving useful information. The old saying is that "a little nonsense now and then is purged by the best of men," and it might as well go by telephone as to be reserved until personal meetings.

The free delivery of mails in the rural districts is an innovation which is even later in its introduction, but is almost a direct outgrowth of the works of the Patrons of Husbandry. It is not necessary now for the farmer or some of his family to visit the postoffice daily for news from absent friends in sickness or in health, and keeping away from the village he can the easier keep away from the tavern that is too often near the postoffice. The farmer can receive his daily papers or his weekly as

soon as they come out, and the time that was once spent in going for them can now be spent in reading them. He can afford to subscribe for more of them because he can read them more carefully.

And the improvement in those agricultural papers is a progress in itself well worth noting. Not only are there the general agricultural papers which try to keep a little going of all sorts, but if he has any hobby or specialty to which he wishes to give more study, he can find papers that are devoted to special branches,—dairying, sheep or poultry breeding, orchards, small fruits, Belgian hares or Angora goats,—and their articles are written by men who have made a special study of such topics, men who can give facts instead of propounding theories.

The agricultural colleges and experiment stations have also done much to educate the farmers and to educate the men who are

better than the rules that have prevailed at some fairs, which seemed to be: (1) How much has the owner done for the promotion of the fair? (2) When did he get a premium? (3) How many premiums has this other man been given? (4) What have the other fairs where they have shown decided? and (5) Is he a pretty good fellow? Sometimes No. 5 seems to be the first consideration, and we have attended fairs where these five seemed to be all that influenced the judges.

To those who want to breed pigs to sell we do not know as we can recommend any breed as better than the Yorkshire, either large, medium or small, for we look upon them as all of one blood naturally, only changed by the selection of types, as are the different breeds of poultry that vary more in color than in form or other qualities. There used to be those known as Cheshire

sell his stock at a fair price when in good condition and begin anew with a new breed, but with these it may be more a question of learning new methods of caring for them and feeding them than of the change itself, and this is even more true of sheep and cattle. Scarcely any two breeds will thrive alike under the same treatment and food, and the man who has learned how to get the best results from one may not find it easy to adapt his ways to something radically different. The dairy cow and the beef cow, the mutton sheep and the wool sheep are not alike in their needs.

On light and spongy soil the pasturing of the wheat and rye crops with sheep may be of benefit, not only because it induces more stooling out, causing a thicker growth and less chance of lodging, but because the treading of the sheep makes the soil more

show that we could expand our sheep industry about fifteen times without raising more sheep to the acre than do in England.

The improvement noted, and which should be extended much further, is that of making every acre supply more food for the sheep, and in such a way that it would actually cost less to raise sheep than it does on the free range. This, of course, must be accomplished by raising the right crops, and by taking advantage of the sheep's power to increase the fertility of the soil. The weeds, briars and bushes in a field represent just so much waste of space. The sheep will not eat them and they annually take up so much room. By grubbing these out it is possible to improve the pasture without much help. The sheep will keep them down and nibble off any new sprouts that may appear. But we first must take away the weeds,

Rape is a fodder plant whose good qualities are not fully appreciated. In addition to furnishing a rich, succulent food, it prepares the ground for such crops as wheat, rye and other cereals, by reason of its deep-rooting habits, which bring much latent plant food from the subsoil and leave it on the surface available for shallow-rooted grains. Rape, however, is a coarse feeder, and unless it is grazed or the manure returned to the soil, it will impoverish the latter.

While we may not all be "bugologists," it may nevertheless be convenient to have a bug collector's outfit, or at least part of one, on the farm, in case it is desired to prepare specimens of insect pests for identification or shipment to State experiment stations. For the purpose of killing the bugs without injuring or mutilating their bodies, take an empty one or two-ounce, wide-mouthed bottle, it will naturally be a thick, unbreakable bottle, and place in the bottom a piece of cyanide of potassium about one-half inch thick. Over this pour a little liquid plaster of paris, just enough to cover and imbed the cyanide. Close the bottle with a tight cork. It will now be ready at any time to receive bugs, and the killing properties of the cyanide will last a long time. No bug can withstand the fumes for any length of time.

Incubator people may be interested in a report which comes from Saxony of an efficient apparatus for telling to a day the age of an egg. The machine is constructed upon the principles that the air space at the larger end of the egg increases in size with the age of the egg. When the egg is placed in liquid, it has, consequently, an increasing tendency to become vertical, with the blunt end uppermost. The apparatus itself consists of a glass vessel, bearing at the back lines drawn at various angles, each line being marked with the age. The vessel is filled with some harmless liquid, in which the eggs to be tested are laid. Each egg will take up a certain position, and, according to its age, its longer axis will be more or less inclined to the horizon. The direction of this axis is compared with the lines at the back of the vessel, and the age of the egg read off at the lines to which its axis is parallel.

A new-laid egg lies horizontally at the bottom of the vessel. An egg three to five days old raises itself from the horizontal, so that its axis makes an angle of about twenty degrees. At eight days old this angle has increased to about forty-five degrees, at fourteen days it is sixty degrees, at about three weeks it is seventy-five degrees, and after four weeks it stands upright on the pointed end. A bad egg floats. With practice it is stated that the age can be told to a day.

In a series of Government wheat-growing experiments in New South Wales, the superiority of drilling over broadcasting seed was incidentally demonstrated by an increased yield of over two bushels per acre in every instance.

In last week's correspondence mention was made of Messrs. Lathrop & Fairchild's world tour in search of new and valuable agricultural seeds and plants. During the trip Mr. Fairchild penetrated the Persian Gulf region and explored the agriculture of the Tigris river. Here he found undreamed of numbers of date trees of all kinds. Some of the first dates of commerce come from near Bagdad. Dates must have thriven in countless forests in the region of the ancient city of Babylon, near where the greatest irrigation reservoir is supposed to have been constructed by the old King Nebuchadnezzar. Mr. Fairchild saw one grove or forest of dates which numbered over five million trees. All the dates in Egypt number but seven million. He secured ten tons of young trees for American date growers in some thirty new varieties, and all early ripening. These will be distributed by the Department of Agriculture throughout our Southwest, and date trees grown from them. The date industry holds great possibilities for this country, but it will be slow in developing, since the dates must be propagated by suckers, as they do not come true to the seed.

Had the present nations of Persia the energy and push which the followers of Cyrus had, they could increase their date forests by thousands of acres. The Tigris country is as level as a floor, and the dates for seventy miles along the river are irrigated by the rise of the tide. Leads are cut from the river out through the maze of date trees, and as the ocean water pushes back the fresh water of the upper Tigris, the latter is forced through the date canals; then as the tide ebbs, the water runs out. Only the lands near the river are ditched, but vast areas additional could be reclaimed if the people possessed the necessary energy to lengthen their canals.

Hand-made Japanese vellum is a fine parchment paper which most of us have wondered probably why the Japs should make better than can Americans. Mr. Fairchild found that it is made from the bark of a very pretty plant which grows in the mountains of Japan. He believes that our own farmers can grow this plant on a large scale, and that our paper manufacturers can find a way to make it up into paper by machinery which will be equal to the Japanese product. He secured a quantity of the plants and they will be experimented with in our milder mountainous regions. He had several specimens of products made from this fibre. Some thin onion-skin paper had almost the toughness of woven cloth, while a pocketbook he showed me appeared like well-tanned leather. A native cloak, reaching nearly to the knees, weighed but eighteen ounces, was thoroughly waterproof and cost in Japan thirteen cents. GUY E. MITCHELL.



A HAPPY FAMILY.

teaching the farmers, so that they are prepared to teach them in the schools, the institutes or through the columns of the press.

Live Stock Notes.

The Associated Wool Growers Company have received from Nephi, Utah, a fleece of wool that weighed thirty-three pounds net, and when stretched on the floor measured eleven feet long and eight feet wide, with a staple eight inches long. The grade was a good half-blood and pretty fine at that, being almost an X-grade. This is said to be the largest they have received, although they have had many very good ones.

The Michigan Agricultural College named twelve points to the recent graduating class on judging live stock at fairs and elsewhere

that we have not seen at fairs, or seen exhibited at any of them lately that we think were much like the medium Yorkshire, and possibly were the same. When we had them they gave us good results, as they were prolific breeders and fattened quickly under good feed. The Poland China are favorites in the Western States, as may be seen by an examination of those sent to our packing-houses, and they suit the packers because they cut up well, with a good proportion of ham and shoulders, and yet a plenty of lard or fat meat, but we fear that many of them in New England, where there are few of them, have been so inbred that they have not retained the reproductive power that they are said to have in the Western States. A litter of six or seven pigs is as much as can be expected from the Poland Chinas here, and often they do not reach that number. Some attribute this to close inbreeding, but we are more inclined to think it is the close confinement usually given to the hogs in the Eastern States, which prevents them from taking the exercise that they are in need of. The same fault has been found with the Berkshire and Essex pigs, but we think the prejudice against black hogs in New England has helped not a little to prevent them from becoming popular here.

"Stick to it and keep a stickling to it" was the advice a young school teacher gave to a scholar when she came to him with a problem in mathematics which was a greater puzzle to him than to her. That is the advice we would give to all those who have engaged in stock breeding. Having selected a variety to begin with do not be changing every year from Hereford to Jersey, and then to Devon, Shorthorn, and so running through the list as it may chance to be. The same is good advice in regard to sheep, swine and poultry. We do not mean that one should never change, but he should not be too fickle-minded. Make a deliberate choice as to the breed that suits you best, and it will probably be the best breed for you, because you will always be in love with it, which will lead to your doing your best by it. With the poultry and swine a change is not such a serious matter, because one can usually

compact, and less liable for the plant roots to be thrown out by the frost. But there is a danger of feeding too closely. Naturally the sheep like the green feed of the grain fields and thrive well upon it, and the lambs grow rapidly, which is a temptation to keep them on it, but they may gnaw it so closely that there will not be protection enough for the roots if the winter should chance to be cold with but little snowfall. It is better to take them off too soon than to keep them on too long, as the loss by winter-killing might exceed that by lodging if not fed closely enough. On light lands it is better not to let them in at all, or for only a short time, as there is little danger from too rank a growth unless the land is heavily manured with stable manure or other nitrogenous fertilizer. Perhaps in such case it is better not to let them in at all, as they will not make much growth when turned back to a scanty pasture, unless the food is made up to them by grain rations. A bit of land sown to flat turnips the seed being broadcasted with them and grass seed, makes a good grazing field for sheep until the frost kills the tops. They will eat the leaves and pull up many of the turnips and eat them. This is an old English method, and the turnip fields are pastured with sheep are among their most productive lots for cultivation the next season.

The sheep do not appear to hurt the grass roots among the turnips if the field is intended for mowing. If not the grass seed need not be sown with the turnip seed.

Reducing the Acreage for Sheep.

One of the steady improvements noted in sheep raising is the gradual reduction of the amount of acreage necessary to support a flock of sheep. We have always been extravagant in this respect, demanding two or three times as much land to support a sheep as in any of the European countries. In England, where sheep raising has always been the best and most highly developed, they have one sheep to every three acres, while we have about one to every forty-five. This, of course, does not indicate that the English breeders support more sheep to the acre in every instance than we do. There are instances in this country where we do much better than any of our English brothers. But it does

bushes and briars to give the sheep a chance. The soil is always highly fertilized by the sheep, and their little feet compact the soil around the roots of grass plants so that they are less liable to injury by cold and thawing winter weather. Altogether sheep improve our soil conditions, and a farm properly conducted should be able to support from four to six sheep where today they are feeding one horse or steer.

OIO. E. P. SMITH.

Notes from Washington, D. C.

There have been several recent cases of dog biting in Washington where the Agricultural Department chemists have relieved the anxious relatives of bitten boys by determining whether the offending dog was affected with hydrophobia. In one case microscopic examination of the carcass of a dog which bit a child showed that the animal had the dread disease, and the boy was bundled off at once to a Pasteur institute for treatment, before the virus should have accomplished its deadly work.

It seems that there has always been some question whether there is such a disease as hydrophobia, and some few men have contended that there is no such thing, the same as here and there you will find a man holding out against the theory of vaccination for smallpox, with the claim that the disease is not contagious. A couple of years ago, during the "dog days," when all Washington dogs were seized by order of the city authorities, the Washington Post took decided exception to a statement given out by the Bureau of Animal Industry on the mad-dog question, and produced several sharp editorials, calling attention to what it termed the hydrophobia fake.

The controversy waxed interesting for a few days. Dr. Salmon, chief of the bureau, was interviewed, and stated positively that the disease was the result of a bacillus well known to science. This statement the Post dismissed as unreliable, and airily closed the incident. However, the majority of the government was piqued, and a bulletin soon appeared in which the subject of hydrophobia was fully discussed by the most eminent authorities in the land, and the disease explained. All of which goes to show that editors are sometimes safer to confine their remarks to news matters than to enter into scientific controversy.

Dairy Notes.

The Dairy Record of St. Paul, Minn., gives the score of the three samples of butter which were given the three highest prizes at the State Fair in that State. We omit names, but No. 1 scored 97½ points in a total of one hundred; No. 2, made from pasteurized cream, 97 points; No. 3, 96½ points. They were scored again just one week later. No. 1 showed age and had become rather rancid. No. 2 was fresh and sweet, and did not show age. No. 3 had developed a weedy flavor, besides showing age. No. 1 then scored 97½ points, falling off five points in a week; No. 2 had fallen off one point to 96½, and No. 3 five points to 91½. We do not wonder that the butter from the pasteurized cream showed better keeping qualities than the other, but we do wonder why the others fell off so much in flavor in so short a time. We have eaten June and September-made butter, made by the methods in use from fifty to thirty years ago, when it was more than six months old, and we detected no indications of any bad flavor or lack of good flavor. It is true that we are not a professional expert, but we think we could detect a rancid or a weedy flavor, then or now. We are inclined to the belief that we suggested some weeks ago, that the water used in washing out the buttermilk and cleaning the milk utensils has much to do with this matter of rapid deterioration. It might often have a weedy flavor, or such germs as would cause a rapid change to rancidity, whether it was taken from a cow's supply or from the farm well. We have tasted water from both sources, which was very good when fresh drawn and cold, but was decidedly unpalatable after standing twelve hours. Such water not thoroughly drained or worked out would soon impart bad flavors to the butter.

The use of the separator on the farm will relieve the creameries of one problem which has been a puzzle to some of them, the way to dispose of their skim milk. Many farmers who brought them milk would not take the skim milk, some because it had soured and they thought its feeding value did not repay the extra trouble of thoroughly cleansing the cans they took it home in, and others because they would not bother with pigs and calves anyway. Many of the creameries did not care to engage in the business of fattening pigs, some because they could not easily locate the pigery so that its odors would not reach the creamery, and some of the co-operative creameries because it would require an additional investment which might not prove profitable. Yet almost every farmer has faith that with an abundance of skim milk, the wasted from the farm, and a little purchased grain, he can fatten hogs profitably. We have no doubt that most of them can do so, though some are likely to have better success than others. It is not always the most liberal feeder that makes the best profit, and it never is the one who thinks half enough is a plenty, but the one who knows how to mix the various foods in the proper proportions, and will give them at regular intervals in regular quantities. But the average farmer, with just animals enough to use up his separator skimmed milk, will do this better than the man at the creamery, unless they employ an expert for that branch of the business.

The New York Farmer says that the inspectors of milk in the city are too ready, when they find milk that is filthy, to put agents at work to find out the farmer who shipped it, and place the blame on him. They search his premises, and if they can find any possible cause to which they can attribute it, they condemn his product and tell buyers to refuse to receive it until a reform has been made. They do not take notice of the sour, filthy cans into which the milk is dumped on its arrival in the city, and the length of time it is allowed to stand uncovered in the foul and dusty air of stables or milk stations before it is sent away to customers or of the filthy clothing and foul breath of those who handle it.

The Allentown (Pa.) Leader says that Mr. Simmons, the food inspector of the Pennsylvania agricultural department, has been testing some forty specimens of milk taken from milkmen in Allentown, and he found some adulterated with formalin, and thinks that others have adulterations of boric acid, salicylic acid and dichloride of mercury, all of which are preservatives, but poisonous in large quantities, and unwholesome in smaller doses. He claims the farmers are more often guilty of adulteration than the milk dealers who peddle it on the street. He found one case where skim milk was mixed with glue, and then colored and sold as pure cream, to be used in making ice cream. One might think with that with glue ice cream and soda made from marble dust, the digestive organs might become as impenetrable to bullets as was that of the soldier who had been dosed with tincture of iron.

But now you have the two different statements as to milk adulteration, and our readers may decide which is correct, or if they both are correct in some cases, but not in all, and we hope not in a majority of cases.

The following is contained on a card issued by Mr. George H. Barr, Inspector of cheese factories in western Ontario.

"The following are some of the causes of gassy and tainted milk:

"Allowing the cows to drink impure water from dirty watering troughs, stagnant ponds, soakage from barnyards.

"Feeding rye, rape, turnip tops, ragweed, leeks or apples.

"Not wiping cows' flanks, udders and teats before milking.

"Milking with dirty hands.

"Using wooden pails for milk.

"Not straining the milk immediately after milking.

"Stirring or aerating (exposing to the air) close to a swill barrel, hogpen, hog trough, hogs, barrow or milking yard.

"A rusty old milk can.

"Milking the cow, dumping the milk into the milk can and leaving it over night without either straining, aerating or cooling.

"Some milk is caused by leaving or keeping it at too high a temperature.

"Milk should always be strained and aerated by running through an aerator, dipping and stirring immediately after milking.

"In warm weather the milk should be cooled by setting the pails or can in cold water while it is being aerated. Cool to 65°.

"Saturday night's and Sunday morning's milk should be cooled to sixty degrees, set in a cool cellar, and covered with a clean robe or blanket and let alone till Monday morning.

"Milk cans and pails should be washed with a brush and lukewarm water in which a little salt soda is dissolved, then scalded and placed on their sides in the sun. Cans and pails should be scoured with salt occasionally.

"A rusty can should never be used to send milk to the factory.

"Successful dairying can be summed up in two words, 'Be clean.'

Bees and Honey.

We have been asked how one is to know when the bees have the forty pounds of stored honey that we have said is requisite to carry a colony through the winter out of doors, if the hive and frames were not weighed before they were put in use. The weight of a hive and eight frames, made of well-seasoned stock, is not far from eight to ten pounds, and if with the bees and their stores when it has not been out in a long rain it weighs fifty pounds, it may be presumed that there is not far from forty pounds of stores. The ten and twelve frame hives will weigh more, and need more stores if they are large colonies, as they should be. Perhaps sixty-five pounds as total weight should be enough for them. After one has weighed a few hives he should be able to estimate the weight of others very closely by lifting them, unless he is so strong that he cannot tell whether he is lifting fifty pounds or thirty.

Many writers upon bee topics are now giving their instructions as to the methods of robbing strong colonies of brood comb, and adding to it weak ones, that they may be strong when they go into winter quarters. Experts may be able to do this safely and to advantage, but we would caution those who are new in the business not to try it. There is a chance of weakening the strong colony, so that it will produce but little the next season, and there is also a chance that the weak colony may not have enough nurse bees to care for the brood thus suddenly thrust upon them. Some may say that this is a very small contingency, but the beginner may find it an important one too.

It is better to unite weak colonies, or to unite the bees with a stronger colony, by giving the brood and comb to them, and destroying the queen of the weak colony. There may be cases where the weak colony may not have enough nurse bees to care for the brood thus suddenly thrust upon them. Some may say that this is a very small contingency, but the beginner may find it an important one too.

In this article Professor Sanborn says in part: "The older members of a generation of farmers now passing away tell us that New England pastures have greatly deteriorated in their day. At present on the average pasture by dint of hard work stock may make a short growth, and on the better class of pastures a low grade of beef. Three or four fold the area is required that should be fitly pasture a fatting steer, while the herbage is neither as palatable nor as nutritious as it should be. Weeds and brakes divide the annual supply of plant food and shade the grass. Weeds, bushes and change in character of grasses tell of a century's flow of nitrogen, lime and phosphoric acid from the soil, and in their character tell us, that these have not gone in proportionate amounts.

This drain of phosphates and change of herbage has left so little of easily available

and palatable foods that animals will not eat palatable food enough for a growth yielding economic results. Growth has been reduced per season from 150 to 175 pounds,

and on the best pastures two hundred pounds. We should be better off without the pastures, as dependence upon them compels the sale of a lower grade of beef than can possibly yield a profit, and compel us to winter stock once or twice too often.

In the improvement of pastures the work of restricting them to grass, as against bushes and weeds, must be the initial step.

When the soil is handled for grass, and the bushes cut a few times in August and the trees kept back, grass will gain a hold and retain it. Seeding pastures anew and working in the seed is a temporizing expedient. Seed is not fertility nor can it replace it. Fertility and fertility of the right sort must characterize a good soil. Plant food may be applied in yard manure, and with new and right seed will give in good time a mat of pasture grass, but our New England farmers have not yard manure to be used for this purpose.

Grain feeding in pastures, with partial reference to improving them, is a worthy practice, though a slow one for our times and necessities. It betters the condition of pastures and moves in the right direction.

The application of chemical fertilizers must be, however, our main reliance for the improving of our New England pastures.

The quantity required is not large after the first good growth is secured. The application of thirty-three pounds of chemicals, costing not more than fifty-five or sixty cents, would supply the loss to the soil in the elements of plant food carried off in two thousand pounds of milk. But no practical man would begin their use with but thirty-three pounds of chemicals annually. I named five hundred pounds annually in the July report, with an annual reduction thereafter. From 125 to 150 pounds annually would give marked results; would double the grazing value of an acre in a brief period.

Tankage supplemented by ashes would make an advantageous fertilizer. Bone meal is an old and tried pasture specific.

Chemicals may be better adapted to pasture fertilization than yard manure, because any proportion of nitrogen, phosphoric acid or potash may be used. An eight-years' rotation, assigning one year for pasture, is my own system, as I am pressing all pasture ground and woodland possible into fields.

By it more cows can be kept than by the pasture system under chemical fertilization.

Authorities contend that a mixed grass sward in a pasture yields more and better grass than a single grass can, and the point is well taken, yet may be given an exaggerated importance.

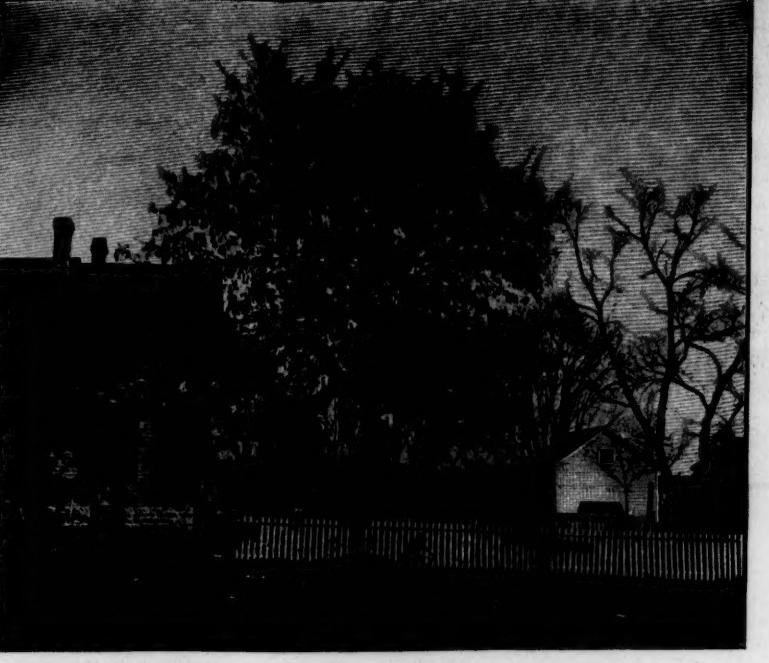
It costs more to seed mixed grasses by a heavy margin. I made in Utah a trial of nine varieties of grass and clover, and all of these mixed together will yield the best results, while a mixture of all combined did better than any, thus justifying popular views.

One sowing down for pasture to remain a few years should not hesitate to use mixtures.

Red top and Rhode Island bent grass may be added to the varieties mentioned above, for New England soils, especially if a little moist. In reseeding a rough pasture a spiked toothed or smoothing harrow is usually used to work in the seed when the soil is moist, or in wet times in early fall.

I would clear all pasture ground incapable of tillage of weeds and bushes, sow the ground to mixed varieties of grass seed and chemicals, and, at least for a time, partly burn feed. All land suitable for tillage should be taken into rotation with fields and made very productive. Other less effective systems may be adopted, but it is imperative that some system of improvement that is comparatively quick in action be taken up at once.

This bulletin may be secured on application to Hon. J. W. Stockwell, Secretary State Board of Agriculture, State House, Boston, Mass., and those interested may also have their names placed on the mailing list for future reports.



A FRUITING (FEMALE) BOX-ELDER TREE IN DECEMBER.

MISHAWAKA WOOLEN MFG. CO., Mishawaka, Ind.

Literature.

A remarkably strong story by J. Breckenridge Ellis is announced for early publication by George W. Jacobs & Co., entitled "Adnah: A Tale of the Time of Christ." Mr. Ellis is already well known as the author of "Garcilaso," "The Indian and the King of Kings," etc., but "Adnah" is decidedly his best work, the conception of the story, the working out of the plot and the literary style being of a very high order. It is a story of revenge—of revenge changed into an unlimited capacity for loving service. Adnah has an enemy, an enemy who has wronged him shamefully, and his whole nature centres upon one thought, one desire—an intense longing for vengeance. The determination to satisfy this becomes in his mind the sole reason for his existence, and forces even his love for the beautiful Miriam—deep though it is into a secondary place. Yet strong as is this thirst for revenge, it is quickly checked and strangely turned aside, and in its place comes a wonderful new spirit of forgiveness and desire for loving service, that appears in strong contrast to his former feeling toward his enemy. Adnah had "bowed to Jesus and learned of Him," and in all his after life we see the subtle influence of the teachings of the lowly Nazarene. "Adnah" is a book with a lowly Nazarene.

Fertilization of Orchards—That our orchards in New England, in both earlier and later times, as a rule, with very few exceptions, have not been highly fertilized, I trust will be admitted by all, and until within the last thirty years, or about that time, there were causes existing for that state of things, which could not, prior to that time, be easily avoided.

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MASSACHUSETTS PLOUGHMAN
NEW ENGLAND AND
JOURNAL OF
AGRICULTURE.

The eagle eye is apparently no part of the club equipment of the Eagle Veteran Firemen of Shobetown.

The relief fund is still growing. Lack of fuel seems to have a salutary effect in warming hearts.

Now that a hunter has accidentally blown off his own head, the merry season is fairly on in the Maine woods.

A burglary of several thousand dollars worth of furs suggests the possible combination of a desperate man and an ambitious wife.

It is possible,—and so it would at least appear from the continuance of the nightshirt parade,—that the pajama has not reached Bowdoin?

Evidently the old lady in Nova Scotia who threatens the courts with an appeal to the United States has some mixed notions of the Monroe Doctrine.

A passing glance at the opening address of President Flanders at the annual session of the Farmers' National Congress gives one a striking notion of the one kind of "farmer."

Lives there a man with imagination so alive as to think that the President's medical advisers really thought that the President wouldn't review the Grand Army parade?

Advertising columns are justly famous for turning up some conflicting statements. "A young man," to quote a recent example, "strictly temperate, requires situation; will take anything."

We have not yet seen what Mrs. Carrie Nation has to say about Lady Henry Somerset, but most of us have taken considerable pleasure in what Lady Henry has to say about Mrs. Carrie.

Nobody can say that youth ought not to start the winter in the proper spirit if the good advice recently on tap at the various college openings is absorbed even in houeopathic doses.

Coal has the right of way at the ports. The Treasury Department has almost authorized inspectors to overlook a ton or so of undeclared fuel hidden in a passenger's personal luggage.

The retirement of a New York police captain with a fortune of about a million dollars leads one to think that the proper advice for young men some ten or more years ago would have been: Go to New York, young man, and grow up in the force.

Revenues and expenditures of the postal service, according to the latest reports, come nearer balancing each other than ever. In due time, apparently, the service will pay for itself, and then will come the people who think that a two-cent stamp really doesn't carry a large enough load of letter paper.

Those who have no pearls will be comforted by the statement of a contemporary that if you have pearls and wish to keep the color of them you really must wear them all the time. We all know how uneasy lies the head that wears a crown, but how about the nape of the neck that wears a pearl necklace?

The very poor are apparently safe so far as fuel is concerned in Boston; but unless a certain amount of coal is put on sale at moderate prices, the good intentions of philanthropy will fail to reach an appreciable number poor enough to suffer from the high prices, and yet too proud to ask for assistance.

The picture of a fifteen-year-old boy sentenced for murder and bowing politely to the magistrate looks back to the amenities of life as once practiced by Sixteen String Jack, so named for the sixteen ribbons that constituted his claim to a place among the dandies of his period; and polite in proportion to his strings.

The Demon Rum led some six thousand less victims into the criminal court during the past year than during the year immediately preceding. The fact is one among several others that show intoxication to be on the decrease, although there is still quite enough left to keep the various elements working against it comfortably busy.

The report comes over seas that a Russian doctor has succeeded in reanimating a heart that had ceased to beat some twenty-four hours previously, and has kept it going for full hour. The modest application, which the doctor hopes to make of his discovery, namely, to use it as a means of resuscitation in cases of drowning, looks very much as if the seeming miracle had been actually accomplished. Such reports are usually accompanied by the statement that those who can afford to do so will soon be able to live forever.

The old assertion that cattle and sheep require the same amount of food per 1000 pounds in weight is said by Prof. C. F. Curtis to have been disproved by experiments at the Iowa station. They found that sheep consumed 29.7 pounds of dry matter for 1000 pounds in weight, and made a daily gain of 3.73 pounds of live weight, when on full feed. The cattle used 19.6 pounds of dry matter, and made a daily gain of 2.14 pounds per 1000 pounds of weight. Thus the sheep ate 48 per cent. more food, but gained 75 per cent. more in weight. This may do for an average calculation, but like all averages, certain breeds, and more especially certain individuals, will vary much from the general average, being influenced by conditions under which they are kept and by their health or digestive powers. The only safe way of deciding these questions is to carefully watch each animal and the results of the feeding.

An exchange says that of the supplies of England ninety-three per cent. of their lard, eighty-nine per cent. of their hams, eighty-four per cent. of their tobacco, eighty-three per cent. of their wheat flour, seventy-four per cent. of their fresh beef and cotton, seventy-two per cent. of their live cattle, seventy per cent. of their Indian

corn and sixty-four per cent. of their bacon came from the United States or through us from Canada. How long then could they exist if a war should prevent us from furnishing their supplies. They might get along without our tobacco, but their mills must stop if three-fourths of their cotton supplies were cut off, and how long could they exist without the supplies of food we send them? It

would be a hungry day as well as a cold day soon after we should stop supplying them. But they import about \$15,000,000 worth of oleo a year, or 105,000,000 pounds, of which in 1900 only seventy-five thousand pounds were from the United States, and most of the balance from the Netherlands, France and Germany. In 1900 the Netherlands sent them \$7,000,000 pounds, valued at \$11,000,000, about 98 per cent. of their entire consumption. Our new oleo laws are more likely to increase the demand in European trade for oleo than to decrease it, as more efforts will be made to extend its sales these, and the export dairy trade must suffer as a result. But we shall have more butter and better butter to use at home, which is some satisfaction.

The consumption of sugar in the United States previous to 1825, was about eight pounds a year per capita. Between 1840 and 1850 it had increased to sixteen pounds, and before 1870 it reached thirty-two pounds, although during the years of the war and a little later, when we had to pay a dollar for four or five pounds, it was much less. Between 1870 and 1880 it reached forty pounds per capita, between 1880 and 1890 the average was about fifty pounds per capita, rising to sixty-six pounds in 1891 and 68.4 pounds in 1901, averaging from sixty-two to sixty-three pounds a year for each man, woman and child since 1890. Yet the United States produces but about one-fifth of all its uses, including both beer, sugar, cane sugar and maple sugar. Yet with the other four-fifths to be purchased, the politicians, at the best of the Sugar Trust, insist upon a duty on Cuban sugar which obliges that country to sell it for less than the cost of production if they would sell it in the United States, their nearest and best market, as are our nearest and might be our best source of supply. Reduce that duty and Cuban planters and laborers would be in a prosperous condition, able and willing to buy our products, agricultural and manufactured. With it continued sugar production is no longer profitable there, and we must pay for the sugar grown by the cheap labor of Germany, which yet needs to be sustained by the bounty of that Government, or for the coolie-grown product of Hawaii.

Fall and Winter Lettuce.

Lettuce has become recognized more as a fall, winter and spring crop than a summer, and it is extensively used because of its appearance in the market when most other vegetables are out of season. The South, East and West are engaged in raising lettuce, and it is supplied to the markets from early fall to late spring. There is, indeed, no better paying crop if one can supply fresh, tender lettuce at a season when the market is not glutted, but lettuce must be tender and not coarse. It is necessary that it should grow rapidly from the start. Slow growth makes the leaves coarse and unpalatable. This can best be accomplished by raising the seed in boxes or cold frames, and then by transplanting later to a highly enriched open garden. In the fall, of course, it must be raised almost entirely under glass frames, but as the crop is a quick grower this can be done until very late in the season. It is even possible to raise lettuce in winter under glass where sheltering buildings keep out the extreme cold. Seeds of new lettuce can be started in boxes as early as February, and with a little care the crop can be transplanted to frames as early as March. A crop raised at that time and shipped early brings in a large price. The soil in the frames should be made of a compost prepared the summer before of rotted sods, sand and manure. This should be turned over many times during the summer, and then when perfectly fine it is ready for the beds. Some Southern growers add to the soil then a little high-grade tobacco fertilizer, which gives plants and seeds a rapid growth. After that the regulation of the sunlight, fresh air and moisture will determine the growth of the plants. They need to be protected from frost, but otherwise they can endure quite a low temperature.

Churchmen in Convention.

Ever since Wednesday afternoon those who frequent the neighborhood of Copley square have been cheered daily by the sight of hundreds of mainly Episcopalian, wearing each and every one on his coat lapel a button with a small red cross. Thus were the delegates to the Convention of St. Andrew's Brotherhood, now going on in this city, distinguished. Red-ribbon badges, also (certainly sufficiently conspicuous against the black clothes worn by most of the men) were to be noted as the delegates passed down Boylston street to their hotels.

The riding ribbons were, however, appropriate, for the occasion was a very joyous one. There is no body in the Episcopal church of which the whole communion is more proud than of St. Andrew's Brotherhood. The genesis of this order has revolutionized the part taken by men in the church life. In dealing with boys outside of church, it had long been recognized that the thing of greatest importance was to give them something good and useful to do, preferably, of course, something for others. This principle has latterly been embodied very happily in the central thought of the St. Andrew's Brotherhood. All the members are from the very fact of their membership pledged to do. And because the men of the Episcopal church have not in the past done so much as men in many churches to lead others towards the benefits of religion, the brotherhood idea came to fill a very real need.

Bishop Lawrence, in his address of welcome given at Emmanuel Church on Thursday, emphasized very properly the fact that the community in which the present convention is held was founded on a deep religious motive. "It was that our fathers might worship God as their consciences prompted them that they came to these shores. Here they dwelt, and here they began to find what they supposed might be a permanent theocracy."

Yet when the first great spiritual motive had run its course there came to be, as the bishop well pointed out, a narrow conception of the faith and the truth. And it was only when there was revealed in the personality of Dr. Channing that charitable, rational sweetness which distinguished the true Christian life that Puritanism ceased to be synonymous with harshness.

It was, however, in Phillips Brooks, of course, that the large humanitarian of Channing was united with the religious sides by him.

faith of the historic church, and because Brooks was what he was made the church increased mightily in numbers, and attracted, as no other church clergymen has done, men who should be full of zeal and good work. Such men is that the St. Andrew's Brotherhood is now helping to grow in grace and spiritual energy.

Merely to look into the faces of the delegates here in Boston, today, is to feel a finer faith in American manhood. And to attend one of the meetings of the Junior Brotherhood, made up entirely of boys who are loyal and enthusiastic wearers of the red cross, is to be quite convinced that the future, as well as the present, of the church is very bright.

Boston is decidedly to be congratulated upon having this army of devoted Christian men a little while within her gates at the beginning of the student year. The influence of such a gathering is not confined to its members, or even to those interested people who attend the meetings. Something of spiritual glow and enthusiasm comes inevitably to a community on an occasion like this, and the cheery aspect of the St. Andrew men will not fail, we are sure, to strengthen in students, as well as in older folk, the conviction that a manhood instinct with faith and service is most worthy of emulation.

Joys of the Hop Picker.

This year's crop of hops is in the hop-house, the sulphur and wood fire have been put out, and the Mohawk Valley awaits the coming up from the city of the buyer.

There are not many old persons nowadays in the hop fields. The rising generation has driven them out. The young folks take a pride in their work, and a personal interest in having their hops clean. It is said that the old folks are apt to be too reminiscent over their work. The number of pickers in the fields this year is placed at thirty thousand,—upwards of ten thousand more than in any year heretofore.

Picking hops, says the New York Sun, is a fascinating employment. Once the habit is acquired of going to the hop country, the desire to engage in the work returns with the coming of the season. In August it was printed that Magistrate John C. Mott had been asked by a prisoner in the workhouse for his liberty, so that he might pick hops. It turned out that this was the thirtieth such request made within a short time. All said they wanted to go and pick hops.

Growers do not come as far away from home as this city for pickers. A corporation was formed here and incorporated at Albany, to supply pickers to growers. They did not get any here, but had to go where the hop pickers are to be found, either at Albany or in the neighborhood of the Mohawk Valley. All the hop pickers stopping in this city have places where they have been picking for years, to which they go.

Pickers, hop growers have learned, are very uncertain propositions. And their promises are not apt to be a source of great reliance. Pickers may bargain in a country town to pick hops, and slip away from the hop grower anywhere before reaching his farm.

"I once hired a number of pickers in Amsterdam," said a hop grower, "and had started off toward home with the bunch. Going across fields, they 'lit out.' I went back and got other pickers, and they, too, slipped away. I had to go home without pickers."

The corporation was formed just to spare the grower all worry, and it certainly did get all it wanted itself. The hop pickers made all sorts of trouble for the new company. The latter showed that it would stand for no nonsense. It had a number of hop pickers locked up in Fort Plain. They were let go after being in jail several hours. Now threats of false imprisonment are made.

On the pickers are in the hop fields nowadays they are fed well and they are comfortably sheltered. They may not be just rightfully situated, now and then getting the fumes of burning brimstone when the wind shifts, but pickers do not mind that, going to the country roads when the sulphur is too strong. In pleasant weather they do not mind it at all, but in storms it is bad, as they have nowhere else to go for miles around.

But the food it is that delights the picker. The air of the country develops a good appetite in him. The twenty or thirty days in the summer, the picker abstains from drink of any kind. This is a new life. His old life is a pleasant memory and in the new one he enjoys anticipation of the good things he is to enjoy again when back in the city.

"How'd you like a schooner just out of the keg?" a picker sitting down to a dinner of boiled beef and cabbage and potatoes was asked on a hop farm some little distance out from Cooperstown the other day.

"I could get away with several of them without difficulty," was the reply, "but heavens, where are they? Miles and miles away."

The food and the hard work seem to tickle the fancy of the pickers. At table and in the hop fields they are as frolicsome as kids.

All sorts and conditions turn up in the hop fields,—mechanics, tradesmen, artisans, song-and-dance men, showmen,—all want to get in shape for the coming season. They don't mind doing work and earning a little money to help along at picking hops.

"Work from sunrise to sundown," a man from this city said, cogitating with a hop-picker who was discussing things, "that's about all."

"No, it's fun, just fun," the picker replied. "Why, I'm having the time of my life."

It is to the hop dance that the pickers resort for real enjoyment. With a country girl or two under his guidance the picker walks a couple of miles there without a whimper. An accordion or a concertina furnishes music. Each dancer is assessed a nickel for every dance he takes part in.

If there are two musicians there certainly will be a fight. No musician in the hop country will consent to a fair division on the lines of an equal share for each. Every cent given to a musician, he argues, was so intended by the person giving it. In other words the persons making the music are the only ones that pecuniarily benefit from the dance.

The feed—crackers, cheese, cookies—all are supplied by the house, and, of course, are handed around freely. Hop dances always break up before midnight. And the dancers walk home. No one thinks of letting a horse and wagon out. Horses have other work to do besides helping in the diversions of hop pickers.

It is on the hop grower's family that the strain of the hop picking bears hardest. The hop grower looks after the hops on the kiln. In the hop season he sleeps in his boots. He has a sharp eye as to the fires, and the sulphur. Several times through the night he pours sulphur on the fire. He looks to see that the pickers get all that is coming to them in the way of food. All his regular work on the farm has to be done besides by him.

His wife has her hands full. She can only snatch a wink of sleep now and then, for she insists upon doing the baking. The loaves are baked once or twice a day. The cakes, biscuits and cookies all have to be turned, and the pies, too. And so it goes, day in and day out.

"Guess I don't want these people going away with the notion that we do not eat and live well in the country," said a matron out in the hop country. "We have fresh meat every day, for all that meat is in the hands of trust. They cannot frightened us, for we have beef, mutton and lamb at our elbow."

"Hop picking is coming to be a means for a larger number of persons to go out into the country each year," said a grower recently. "Folks rather like it, for there is just enough work to suit some, and instead of needing money to pay board, you are sure to bring some home."

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"The average price obtained for all butter as reported by the creameries for 1900 was very nearly 20.1 cents per pound. The average for that packed solid was 19.4 cents, and for the prints or rolls, 21.7 per cent. is made into prints or rolls. The proportion in each of these two classes will vary in accordance with the demand in different parts of the country, some requiring more of one and some of the other. In Vermont, about one-fourth of the product, it is stated, is made into prints, which appears to be a pretty large proportion.

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The Markets.

BOSTON LIVE STOCK MARKETS.

ARRIVALS OF LIVESTOCK AT WATERTOWN AND BRIGHTON.
For the week ending Oct. 15, 1902.

	Sheep	Cattle	Pork
Cattle Sheep Suckers	11,573	1,214	22,561
Last week....	3,377	924	19,662
One year ago....	3,545	135	21,506

Prices on Northern Cattle.
BEEF—Per hundred pounds on total weight of hide, tallow and meat, extra, \$6.75@7.50; first quality, \$5.50@6.00; second quality, \$4.50@5.00; third quality, \$4.00@4.50; a few choice single pairs, \$10.00@11.00; some of the best, \$12.00@13.00; steers, \$10.50@11.50; Western steers, 4@5c.

LAMB COWS—Fair quality \$30.00@32.00; choice cows \$50.00@60.00.

STORES—Thin young cattle for farmers: Yearlings, \$16.25; two-year-olds, \$18.50; three-year-olds, \$28.48.

SHEEP—Per pound, live weight, 24c@26c; extra, 32c@34c; sheep and lambs per head in lots, \$2.50@5c; lambs, \$3.50@4.75.

FAT HOGS—Per pound, Western, 71@7c; live-weighted shotes, wholesale—retail, \$2.25@3.00; country dressed hogs, 8c@9c.

VEAL CALVES—\$1.75@1.75c.

HIDES—Brighton—7@7c per lb.; country lots, 6c@7c.

SKINNED CALF SKINS—\$00@\$1.50; dairy skins, 40@60c.

TALLOW—Brighton, 4@5c per lb.; country lots 2c@2.5c.

PELTS—40@85c.

Cattle, Sheep, Cattle, Sheep.

Northern and Eastern—

At Brighton. J. S. Henry, 10

Libby Bros. 30 25

J. M. Lowe 16

J. A. Berry 16

J. M. Brook 20

E. F. Chapman 23

Geo. Lowell 23

M. D. Holt & Son 16

Harris & Felton 5

lows 55 100

E. F. Foye 24

Foss & Locke 12

W. E. Farnell 5

At Watertown. Farnell & Co. 2

At N. E. D. M. & Wool Co. 12

At N. E. D. M. & Wool Co. 12

At Brighton. G. N. Smith 50

New Hampshire—

At Waterford. V. G. Brown 24

Foss & Locke 12

W. E. Farnell 5

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Our Domes.**The Workbox.**

CROCHETED GOLF CAP.
Use Saxon wool and a coarse crochet hook. Make a chain of 7 stitches and join in a circle.

Work first row round in double crochet, making 2 stitches in each stitch of chain.

Work second row round, making 2 double crochets in every alternate stitch of chain.

This starts the seven divisions of cap. Work third row round, making 2 double crochets at the first stitch of each division, taking each stitch through both loop of a chain.

Work around thus 23 rows, always increasing at the same place. Work 2 plain rows and then decrease by omitting one stitch at the commencement of each division.

Work around thus 12 rounds.

For the head band, now work 6 straight rows in double crochet. Line if desired.

LINEN TABLE COVER.

A beautiful insertion and edging to match convert a linen square into a thing of worth and beauty. Knitted and crocheted lace are pretty when lined thread is used.

EVA M. NILES.

For the Home Dressmaker.

Fashions change so rapidly that there are few homes where the remodeling of last season's gown does not become a necessity, and the question to be considered is how it may be done in the most satisfactory manner. In some large places there are dressmakers who make a specialty of making dresses over, and derive a good income from it, but many women do their own sewing, which is a great saving, and with the aid of good patterns the results are very satisfactory.

If one wishes to accomplish a great deal of work in a short time, it is best to have a small room set apart for the sewing-room. One cannot keep the sitting-room neat if such work is done there, and this consideration, as well as the comfort of the family, will well repay the expense of heating a separate room.

There should be a good machine, a cutting-table, a large and well-fitted work-basket, and a set of drawers for keeping pieces of various materials left from dresses and other garments, spools of silk and cotton thread, unfinished sewing, etc. A wire skirt form is a great convenience, enabling one to see at a glance whether they are even all around or not. A woman with a room fitted with all the implements needed can accomplish almost twice as much as one whose tools are scattered.

When a dress is to be made over it should be ripped apart, every stitch picked out, and the clothed sponged and pressed before it is put together again. Black silk should be sponged thoroughly, then rolled smoothly on a rollingpin. The economical woman buys good material, then when it becomes faded or she grows tired of the color, one or two packages of Diamond dye will make it fresh and pretty again. Navy or indigo blue seal brown, wine color or bottle green are handsome, while black is always a safe change. The brighter shades are often preferred for children. These dyes are not only pretty but permanent, and are a great help to those who must make the best of the material on hand. The sewing should be done as carefully as if it were a new garment, for the little details make a great deal of difference in the appearance of a gown. The safest plan for an amateur is to cut the lining of the waist and fit it on the person for whom it is intended, before cutting the material. Get a good pattern if you do not cut by a chart, and follow the directions in the minutest details, and you can scarcely fail to obtain satisfactory results. The skirt is almost as important as the waist; the top is snug fitting, and the old-fashioned gored are easily shaped without pinning. Two old skirts may be used for one of the new ones with the circular flounce, by using one for the gores and the other for the flounce.

E. J. C.

Care of the Milk Teeth.

Few persons realize what an important part the teeth play in the preservation of health. We all know that life is maintained by the food we take, and we also know that food must be digested before it can be taken into the system and form new tissue. This digestion is effected within the body by the action of various digestive fluids, but the food must be cut and ground by the teeth before these fluids can come into contact with every part of it, and without serviceable teeth this first act of digestion cannot be properly performed.

If the teeth are so important their preservation is surely a matter for which it is worth while to take a little trouble, but they can be preserved only by beginning the care to wear them out quickly. The same holds good with coffee or tea.

The question whether vegetable food or some bread and cheese and beer. Most of them would undoubtedly live longer if they took more suitable food. Cheese is packed with nutrient. But the digestive organs have such hard work extracting this nutrient that it is doubtful whether there is not a loss in the transaction.

Cabbage—the British vegetable—is another shortener of life in a great many cases. Cabbage consists mainly of cellulose, but the human stomach can make nothing of it. It often decays on the inside and gives rise to poisonous gases.

Of course, excess of any kind of stimulant hurries us on to the grave. Beef tea, for example, increases the pace of life and over-indulgence in it would cause the body to wear itself out quickly. The same holds good with coffee or tea.

The question whether vegetable food or some bread and cheese and beer. Most of them would undoubtedly live longer if they took more suitable food. Cheese is packed with nutrient. But the digestive organs have such hard work extracting this nutrient that it is doubtful whether there is not a loss in the transaction.

Teeth come they should be cleaned regularly with a soft cloth and warm water, and as soon as the child is old enough he should have a little tooth-brush and be taught how to use it twice a day. This will help to keep the tender teeth from decay, but more than that, it will inculcate in the child the virtue of mouth cleanliness, and teach him hygienic habits which will stand him in good stead his life long.

If, in spite of care, the milk-teeth begin to decay, they should not be extracted, but should be filled, so as to keep them from falling until the permanent teeth are ready to protrude. The child's mouth should be

examined by a dentist once or twice every year so that the tartar may be removed, and any spot of beginning decay may be detected and treated.—*Youth's Companion*.

The Science of Diet.

Of the 1,160,000 persons born in this country in a year, one-fourth die before their fifth birthday, one-half reach the age of forty, and barely a quarter live the natural span of threescore and ten. Thus, three out of four people, in the healthiest country of the world, die before their time.

This is a very remarkable state of things for the twentieth century. And it is more remarkable when we consider that much of this extraordinary shortening of life is due to the food we eat.

Some time, no doubt, we will have a real science of diet. When that day comes life will probably be prolonged to 150 or two hundred years, and centenarians will think nothing of playing polo, breaking a bicycle record, or performing on the tight-rope or in the prize ring.

There is absolutely no physiological reason why people who escape disease and accident should die at all. Those who gradually wear out and die of old age succumb to a long course of food, which was not exactly what their body required. Comparison of the human body with any machine serves to prove this statement. Both the body and a saw for example, wear out by their daily work. No art can replace the particles removed from the saw, and so a time arrives when it is completely worn out. But in the body, the moment a particle of brain, nerve or muscle is worn out it is replaced by a perfectly new particle. As a rule, this new particle is exactly similar to and quite as good as the old one. If these were so in every case, then our bodies would be immortal. But it is not so in every case. Now and again a defective brick replaces a sound one in the human edifice, till, at length, so many defective bricks are intercalated that the whole edifice collapses.

But the bricks are made of material derived from the food we put into our stomachs.

Hard water, for instance, has in it precisely those elements which most of all bring about death from old age. If a bottle is filled with London water, in a few days it will have become almost opaque from a dirty white coating over the inside. The coating is composed of lime salts—carbonate and sulphate of calcium. Now, what mostly causes death in old people is the deposit of these very lime salts in the walls of their arteries and veins. A healthy blood vessel is very elastic and allows the blood to flow freely through it. But in old age the vessels become hard and unyielding, their bore is diminished, and the blood stream is lessened. This results from the presence in their walls of lime, and the consequence is that neither brain nor muscles, liver nor lungs, receive sufficient nourishment, and life goes out like the light of a lamp without oil.

The calcification of the arteries occurs very slowly, for the blood has the power of absorbing the pure water only and rejecting the lime. But now and again it lets a small quantity in by accident, and a gradual accumulation occurs in all the tissues of the body.

Any kind of food that throws too much work on the bodily organs must necessarily shorten life.

Among meats and vegetables there are many things which shorten people's days upon earth. Roast pork, for instance, throws an enormous amount of labor on the stomach and pancreas. So do roast duck, salmon, mackerel and other things. The stomach gets its extra energy from the brain, and it also draws on the blood for digestive material. This overdriven must be supplied from food, or otherwise the rest of the body will have to go short. But unless a man is very healthy he cannot assimilate enough of food to make good the increased loss. In most people, therefore, these indigestible foods inevitably shorten life.

Many city people make their lunch off some bread and cheese and beer. Most of them would undoubtedly live longer if they took more suitable food. Cheese is packed with nutrient. But the digestive organs have such hard work extracting this nutrient that it is doubtful whether there is not a loss in the transaction.

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As a medicine, honey has great value and many uses. It is excellent in most lung and throat affections, and is often used with great benefit in place of cod-liver oil. Occasionally there is a person with whom it does not agree, but most people can learn to use it with beneficial results. Children who have natural appetites generally prefer it to butter. Honey is a laxative and sedative, and in diseases of the bladder and kidneys it is an excellent remedy.

It has much the same effect as wine or stimulants, without their injurious effects, and is unequalled in mead and harvest drinks. As an external application, it is irritating when clear, but soothing when diluted. In many places it is much appreciated as a remedy for crop and colds: In preserving fruit, the formula it contains makes a better preservative than sugar syrup, and it is also used in cooking and confections. Honey does not injure the teeth as candies do.

In early times, it is said, Palestine flowed with milk and honey, but we have far more today than the people of any previous age ever had.

Toilet of the Hair.

Here are a few hints relative to the care of the hair, set down as briefly as possible, and dedicated to the woman possessed of the truly feminine desire to look her best. No woman can look her best unless she has glossy and well-kept hair.

Good circulation is essential to fineness, luxuriance and gloss. To stimulate the circulation, frequent brushing and massage are necessary.

The right way to brush the hair is to grasp the brush firmly with the right hand and the hair loosely with the left, and brush with a soft, guiding motion, every strand being brushed up, down, to the right, to the left, in semi-circles from the forehead to the centre of the head, then from the nape of the neck upward to the same point.

This operation requires from half an hour to an hour. At the end of the time the head is all in a glow and the hair glossy, elastic and alive with color.

This treatment too, feeds the hair by directing a fuller flow of blood to the hair follicles. One reason why hair falls out is that it is not fed and the circulation is not stimulated.

Use the comb gently and never use a fine comb. It is, at best, but an instrument of destruction, and in general is needlessly and thoughtlessly used.

Hair must be washed once a month to keep it clean. Let the shampoo be a thorough one, with a little borax or the well-known beaten yolk of an egg in the water. Always rinse with clear water. There is no danger of taking cold after a shampoo if a little alcohol is rubbed on the hair at the back of the neck.

Never rub a cake of soap upon the head or the hair. The soap clinging to the hair and cannot be washed off, try as hard as you will. After washing, the hair must be well dried or it will smell musty, and if it is quickly dried, so much the better.

Rubbing the head with towels keeps the hair, but a hot towel can be laid upon the top of the head and another can be wrapped around the ends of the hair.

It is well to have a bottle of shampoo liquid on the toilet table and to use a little about once a week, when the hair and scalp seem cleansing.

That there is a relation between the scalp and the stomach is a fact upon which the wise woman ponders, and she regulates her dietary accordingly.

Women who have the finest hair live principally upon fruits, grains and vegetables. Vegetables and cereals are hair tonics. Too much meat and milk cause atrophy of the roots, and, of course, the hair comes out as a result of this condition.

Milk is the poorest diet for the hair. Nor are tea and coffee much better as promoters of hair growth.

If the hair is falling out eat little meat and drink no milk; live upon fruits and vegetables. Fruits give luxuriant locks, especially those containing iron. Prunes, cranberries and spinach are also useful articles of diet if one would have fine hair. Hair that is growing coarse demands a diet containing albumen and gelatine.—N. Y. Sun.

Domestic Hints.**BAKED TOMATOES.**

Mince very fine a slice or two of bacon with any kind of cold cooked meat. Season well with salt, pepper, add a little minced parsley, and a bit of stock to moisten it. Scop all the seeds out of the tomato, put into the mixture, cover with a few bread crumbs, with a bit of butter over these, and cook till the tomatoes seem tender, but without letting the skins break.

TURKEY HASH.

Mince one pint of turkey; add one-half cup of turkey stock. Heat it very hot in a saucepan. Lay a large spoonful on a round of toasted bread; continue, until all is used. Put a sprig of parsley on the top of one and serve.

POACHED EGGS.

Separate white from yolk; beat the white to a froth, add a pinch of salt, and turn into a pan of scalded boiling water. When thoroughly cooked place on a slice of buttered toast. Drop the yolk into the same water, cook three minutes, and place it unbroken in the centre of the white. Season with pepper and serve.

SALMI OF DUCKLINGS.

Cleanse well two ducklings, sprinkle with salt and pepper, and put in a roasting pan, pouring two tablespoons of oil over them. Cover over the pan with a lid, and let it stand over a fire, using more melted butter, required until the ducklings are cooked. Take from the oven, cut off the legs, wings and breasts in good pieces. Scrape the rest of the meat from the carcasses, chop with a teaspoonful of chopped onion already fried in a butter, and heat all in a little melted butter, a cupful of stock, and a gill of Madeira. Add salt and pepper to taste, thicken with a little powdered flour and pour over the roasted duckling pieces. Serve in the oven to heat a bit, and serve.—The "Epicure."

ANGEL CAKE.

The whites of nine large, fresh eggs. When they are partly beaten add one-half teaspoonful of cream of tartar and then beat the cream of tartar makes them lighter—then add one and a quarter cups granulated sugar, stir the sugar very lightly into the whites of the eggs, and add two teaspoonsful of vanilla extract. Beat the mixture measure a cupful and fold it very carefully, not with a circular motion, and do not stir long. Turn it into a Turk's head mould and bake forty-five minutes. Do not grease the mould, and when taken out of the oven invert it until the cake is cold before removing from the pan. Never use a patent egg beater for this cake, but a whip, taking long rapid strokes, and make it in a large platter, not a bowl.

BROILED MUSHROOMS.

Select large day mushrooms for broiling. Wash, skin and stem them, lay them on a dish, sprinkle with salt and pepper and pour a little olive oil over each mushroom, let them stand one hour. Broil on a gridiron over a nice clear fire. Place on a dish and serve with the following sauce: Prepare the stock as before by boiling the stems and skins in water and then straining. Mix two or three mushrooms fine, add to the stock, with a teaspoonful of minced parsley, a few drops of onion juice, a small lump of butter, cook for fifteen minutes, then add a cupful of

cream, an even teaspoonful of flour wet with some of the cream and rubbed smooth. Let it all cook together for three minutes, then add the beaten yolk of an egg, stir well, remove from the fire at once and serve.

Hints to Housekeepers.

A mingling of clove and lemon flavor in the afternoon tea is delightful. Drop a whole clove into each cup just before serving.

Mint phosphate is a refreshing drink for a hot evening. Crush sprigs of fresh peppermint and add powdered sugar. Mix together lemon juice, slices of pineapple and orange, maraschino cherries and a little phosphate, and dilute with water and crushed ice. Add the mint and sugar.

A garnish for the mutton platter may be prepared from a cupful of rice boiled until it is tender and mixed with one-half can of Spanish peppers chopped very fine.

Most cellarars are too damp for pumpkins and squashes. They keep better in a garage or any place where they can be kept dry and at a temperature just above freezing. If they must be kept in the cellar, place them on a shelf where they will not touch each other. Here they can be easily watched, and when one begins to decay it can be used or thrown out.

When fresh mushrooms are not at hand, add to a can of mushrooms a cupful of onion juice, add one-half cup of Worcestershire sauce and a can of tomatoes. Season with paprika and salt. Cook for twenty minutes. This chicken with a teaspoonful of cornstarch wet in a little milk or water. Serve on toast.

It is highly improper for a person to drink to his own health, hence the only thing to do when one's health is being drunk by his friends is to drink to his own health. To do this is to do the individual honor to leave his glass alone, and bow his thanks in a dignified manner, rising to talk only when he is called on for a speech.

Too much air and light will destroy the flavor of vegetables, and will cause them to dry and shrivel up.

Halibut moulded in a flat form makes an attractive and inexpensive dish. Separate the skin and bones from the fish, chop a pound of the flesh very fine and press through a sieve. Cook a cupful of bread crumbs and a cupful of cream to a paste. Add a teaspoonful of pepper and half a teaspoonful of onion juice and the yolks of three eggs. Fold in the stiff beaten whites of the eggs and turn the mixture into a well-buttered mould. Stand the mould in a pan of hot water and cook about forty minutes. Serve with tomato or tartare sauce.

To make a raisin filling for cake cook slowly a mixture of seeded and chopped raisins, a cupful of water and two-thirds of a cupful of sugar. As soon as the raisins are tender stir in a slightly beaten egg, and cook over hot water until the syrup thickens. Add a flavoring of lemon, and cool before using.

A delightful salad is made of diced pineapple and celery, mingled in equal parts. Dress the mixture liberally with a mayonnaise, to which whipped cream has been added. Sprinkle over the salad slices of salted almonds and pecans.

The Hon. Geo. Starr Writes

NO. 3 VAN NESS PLACE, NEW YORK.
DR. RADWAY.—With me your Relief has worked
wonderfully. For months you have had fre-
quent and severe attacks of sciatica, sometimes
extending from the lumbar regions to my ankles,
and at times to both lower limbs.

I am almost all the remedies recommended by
wise men and fools, hoping to find relief, but all
proved to be of little value.

I tried various kinds of baths, manipula-

tions, outward application of liniments too

numerous to mention, and prescriptions of the

most eminent physicians, all of which failed to
give me relief.

Last September, at the urgent request of a
friend (who had been afflicted as myself) I was
invited to try your remedy. I had great
surprise and delight the first application gave me
ease, after bathing the right parts, and
soon leaving the limb in a warm state
created by the Relief. In a short time the pain
passed entirely away. Although I have slight
periodic attacks, and feel a change of
weakened, I know how to cure myself, and feel
quite master of the situation.

RADWAY'S READY RELIEF is my friend. I
never travel without it in my valise.

Yours truly,
GEO. STARR,
Emigrant Commissioner.



Sold by all Druggists.

RADWAY & CO.,

55 Elm Street, NEW YORK.

Poetry.

MORNING.

I stood on the breezy hilltop,
And gazed far, far away,
Where, in wonderful beauty,
Awoke the dawn of day.
Out of the golden silence
The matin songs of birds,
Echoed the same sweet music
That Edens' valleys heard.

Fair were the silvery dewdrops
That lay on the meadow grass,
Softly the gentle zephyrs
In their onward journey passed.
Forth to daily labor
The throngs of toilers went,
And over a world most lovely
The cloudless heaven bent.

Merrimac, Mass. J. B. M. WRIGHT.

IN GRATITUDE.

Blow, blow, thou winter wind;
Thou art not so unkind
As man's ingratitude;
Thy tooth is not so keen
Because thou art not seen,
Although thy breath be rude.
Freeze, freeze, thou bitter sky,
Thou dost not bite so nigh
As benefits forgot;
Though thou the waters warp,
Thy sting is not so sharp
As friend remembered not.
—William Shakespeare.

SONG.

When I am dead, my dearest,
Sing one sad song for me;
Plant thou no roses at my head,
Nor shady cypress tree.
Be the green grass above me
With the showers and dewdrops wet;
And if thou wilt, remember
And if thou wilt, forget.
I shall not see the shadows,
I shall not feel the rain;
I shall not hear the nightingale
Sing, as in pain.
And dreaming through the twilight
That doth not rise nor set,
Haply I may remember,
And haply may forget.
—Christina Rossetti.

RANCH GIRL'S LUCK.

Jim, he was homely as could be; When he come 'round a-courting' me; He had a tanned an' freckled face, His hands was allers out o' place; His hair was just a fiery red, An' all the gals they've up an' sed The feller hadn't any sense. An' couldn't win my confidence. The folks all thought 'twuz mighty strange I'd take the scrub uv all the range, An' "lowd I was a lumbie." To clinch this boozey trick, When I, by speed, by the word, Could n't pick up all the herd, They hung around the home corral, A-waitin' on their love to tell. An' Jim' uv me was up to snuff, An' knew it wasn't a game o' biff That each boy was workin', and We give the boys to understand That we was old enuf to play The game o' love in our own way, Without them jealous hoochie-rope A-holdin' back our sweetest hopes. The other day Jim struck the place With smiles upon his homely face; He read a letter an' died, His uncle in the East was dead, An, up the fortun' left by him Was fifty thousand planks for Jim! An' now, gal, by smile an' wit, Say Jim's the leader uv the herd! —E. A. Brinstool, in Sunset.

LINES TO AN OLD JOKE.

Poetasters of Pompeii scrawled you on a kind of clay and coming thence, you might be dubbed a trifl'd tattered. Yet, along with Amaranth in dead verse of N. P. Willis, I hold your family likeness austinsomeously etched. You're the jaape yester thynge that even I sawe, sirre! and you doth hang a Canterbury tale; Yet you're prevalent in Asia are that Pierles' Aspasia sets the wits of Athens by in a gale.

Come down to modern times now, within sound of Bow-bell chimes how frequently to flavor punch you have been used!

—Century.

... Then they claim the bows dear girls wear Upon their shoes today Are something new, and yet I'm sure It's quite the other way. For what coquette who ever lived, Whose face was pretty—sweet— Has not "worn" beaux of divers kind— And had them at her feet? —Cincinatti Commercial Tribune.

... I've never had a coronation, I have no royal robes to wear; But the sweetest girl in all creation Says I'm her king, so I don't care. ... I'll regret it, said he, "he said Ere he had won the race.

When he was in the shock his head And with a solemn face Said: "We must move with care, because 'T is wrong to get up special laws," And then he dropped the case. —Chicago Record-Herald.

Miscellaneous.

A New Casabianca.

The office boy called to the man at the desk. He waited a moment and called again. The man looked up.

"What's that?" he sharply asked.

"Tell me to see you, sir."

"She says she must see you, sir. She has a letter."

"Show her in." And the busy man's eyes dropped again to his work.

He was so absorbed that he did not hear the girl when she entered. She looked at his profile for a moment and then seated herself.

Presently he glanced up with his hand outstretched to take a book from the top of the parts, and then leaning the limb in a warm seat created by the Relief. In a short time the pain passed entirely away. Although I have slight periodic attacks, and feel a change of weakened, I know how to cure myself, and feel quite master of the situation.

RADWAY'S READY RELIEF is my friend. I never travel without it in my valise.

Yours truly,
GEO. STARR,
Emigrant Commissioner.

The office boy called to the man at the desk. He waited a moment and called again. The man looked up.

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Presently he glanced up with his hand outstretched to take a book from the top of the parts, and then leaning the limb in a warm seat created by the Relief. In a short time the pain passed entirely away. Although I have slight periodic attacks, and feel a change of weakened, I know how to cure myself, and feel quite master of the situation.

RADWAY'S READY RELIEF is my friend. I never travel without it in my valise.

Yours truly,
GEO. STARR,
Emigrant Commissioner.

The office boy called to the man at the desk. He waited a moment and called again. The man looked up.

"What's that?" he sharply asked.

"Tell her to talk to Mr. Randall."

"She says she must see you, sir. She has a letter."

"Show her in." And the busy man's eyes dropped again to his work.

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The Horse.**Plowing in the Fall.**

Hardly are the crops gathered in before preparations are commenced for those of another year, and first among the work to be performed is plowing. This is the foundation of all good and profitable farming. If there is any preparatory work necessary to be done before the plowing is commenced, by way of removing obstructions, that should first be attended to. Many of our farms are more or less stony, and it may be necessary to remove such as would be in the way of good work. This is something that it will pay to do, for no farmer can afford to plow or cultivate around among rocks or other obstructions that with reasonable effort or expense can be removed.

A large part of the plowing is now done in the fall, and, indeed, in a considerable part of the country, the sowing also. The reasons for the first are that on most farms there is considerable of this work to be done, and there is more time to do it than in the spring. It makes a great difference in the spring work if the plowing was done in the fall. And then if the manure is drawn out in winter and spread on the land where it will be wanted, as is now largely being done, the farmer will be able, as soon as the weather and condition of the land will admit, to go about his sowing or early planting, and generally speaking this means a good deal, as the earlier crops of most kinds are found to be best.

There is usually time in autumn to do this work of plowing in the best manner, and in no other way should it be allowed.

First, get a good plow, one of the best adapted for the work to be done, and do not expect one plow, however good, to be suited to all conditions. There are good plows from which to choose, and the best will be none too good.

Then have a suitable team, with harness, whiffle-trees and plow all properly adjusted to do the work required. With these and a competent man "behind the plow," for all men are not adapted to this work, the results should be satisfactory.

With plowing that is done in fall there will usually be an even, smooth surface for the most effective work with the harrow in spring, when the soil can be most thoroughly pulverized without a second plowing, leaving it in best condition for seeding and cultivation.

As to the depth of plowing that will depend largely on location, soil and kinds of crops to be grown. Every farmer should be able to best judge in this matter. On some farms or soils it may be best to deepen the soil, but this should be done gradually, a little at a time, so as not to bring up too much of the subsoil, which might prove a detriment rather than a benefit.

Of course, there are some kinds of land so situated that it would not be advisable to plow in the fall, and the farmer must exercise his own judgment, gathered from experience and observation in the matter. Some heavy, tenacious soils are benefited by plowing late in autumn, so as to be the more readily acted upon by the ameliorating effects of the winter frosts. Again some farmers like to manure land for corn on greensward in fall or winter, and then plow under a considerable growth of vegetable matter, just before planting, for the benefit of the crop.

Let every man be fully persuaded in his own mind. In all of this the farmer should aim to do his work at the most favorable time, all things considered, and in the best manner, for this is the kind of planning and work that will pay and that is wanted, and nothing of an opposite character should be tolerated or allowed. E. R. TOWLE.

Franklin County, Vt.

Life-Insurance Surplus.

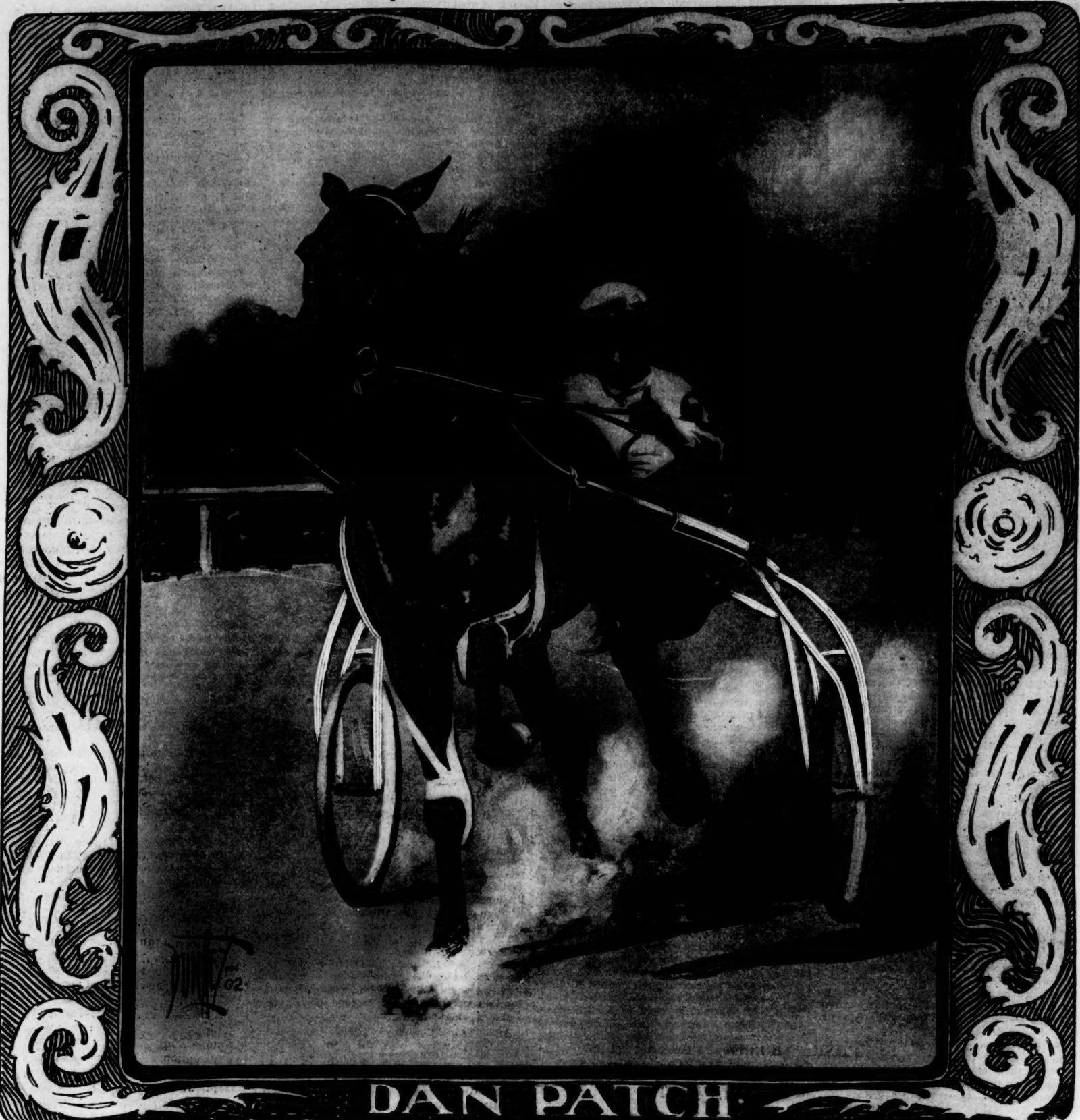
Life-insurance companies are increasingly significant factors in the securities market. Few recent important financial transactions in this country have been free from influence of the few strongest companies. Of the capacity of these institutions to absorb securities there seems to be no end. It becomes an important matter, therefore, what securities they are willing to absorb. It is of corresponding importance to the public and the policy holder to realize the significance of these absorptions.

A few figures will disclose something of the situation. At the close of last year the sixty-seven leading insurance companies, both life and fire, reported total holdings of stocks, bonds, mortgages and real estate of more than \$1,300,000,000. Nearly all insurance companies are of the "mutual" variety, that is, managed for the benefit of the policy holders. Notwithstanding this fact, these reports show that for last year the total income of these companies amounted to about \$376,000,000, more than \$200,000 above the amount paid to policy holders for all purposes. Expenses were about \$77,500,000, so that there was a surplus of more than \$120,000,000 in which policy holders did not participate at all.

These are not the figures of a phenomenal year. They represent a tendency toward the accumulation of large surpluses. The simple fact is that the income of these institutions is enormously greater than their outgo. The extent of the investments and the manner in which they have been distributed represent the fact that the insurance company has ceased to be merely a benefit association. The ganglions of its life have traversed the entire financial world. What is true of insurance companies in general is especially true of life-insurance companies. The more important of these have become not only what their name signifies. They are, in fact, banking corporations, trust companies, safe deposit concerns, and possess in addition a powerful influence in the affairs of railroad corporations.

For example, the Mutual Life Insurance Company of New York owns a controlling interest in the \$2,000,000 capitalization of the United States Mortgage and Trust Company, as well as several million dollars worth of the bonds of the same corporation. The New York Mutual owns almost control of the Guaranty Trust Company. A very considerable interest in the great Morton Trust Company is similarly controlled. Each of these companies has offices in the New York Mutual's building in the city of New York. Each is in close touch with the others. The resources of each are ready any time to co-operate with those of the others.

Notice the Equitable Life Assurance Society's report. This society—whose capital stock is \$1,000,000—owns absolute control of the Western National Bank, with its \$2,100,000 capitalization, and of the Mercantile Trust Company, with \$2,000,000 capitalization. Subsidiary to the Mercantile Trust Company—which is an exceedingly powerful concern—is the Mercantile Safe Deposit Company, itself a most profitable organization. All these corporations rest under the wing of the Equitable Society, having offices in its building. It may be assumed that, for all practical purposes, they are one institution.

**DAN PATCH.**

Within the current year the activity of the great life insurance companies in the financial market has been more pronounced than during any previous period. When the International Banking Corporation was organized in January, with \$10,000,000 resources, it was announced that the Equitable Society had taken a large interest in the company. That new banking institution was formed expressly for the purpose of facilitating a foreign exchange business between New York and cities of the far East. Immediately upon its formation it was found that the Guaranty Trust Company, fostered by the New York Mutual Company, had been equipping itself also for an international business in the same territory. That law has curtailed the New York Life's list of investments, but that company is nevertheless a great figure in the financial market. George W. Perkins, chairman of the finance committee of this company, was not long since made a partner in the firm of J. P. Morgan & Co. Through loans, always, of course, properly secured through deposits in stocks, and through other media quite as legitimate as ingenuities, the New York Life Company manages to avail itself of large profits placed by J. P. Morgan & Co. within the reach of their patrons.

The tremendous accretions of power of these great insurance companies has excited alarm in numerous quarters. Russia, always jealous of the funds of her people, requires that all money paid to insurance companies in that country shall be invested there; Germany imposes a similar regulation. France is upon the verge of doing the same thing. One important American insurance company invested \$2,000,000 in real estate in Paris, largely for its political effect in warding off the passage of just such a law. England's insurance laws are as liberal as could be wished, yet an American company maintains a voluntary bank deposit of \$500,000 in a London bank to allay apprehension.

In this country insurance companies themselves are seeking to devise some means by which the money paid to them in premiums, interest on bonds and mortgages, etc., may be placed within reach of the communities from which the income is derived. A large amount of money is placed in State and municipal bonds, but these do not afford any material relief to the individuals from whom premiums have been drawn. Relief is possible, to some extent, by the proposed revision of mortality tables which is expected to take place within a few years, and which, it is believed, will reduce the size of premium payments.

It is possible that the very solution of this problem of distributing the resources of these companies may come in a still

greater development of investments in diversified enterprises. The supply of available investments of the orthodox type is getting very limited. The most conservative companies do not expect during the next twenty years to reap more than three per cent. upon their investments. It will be necessary,

therefore, for these companies to branch out into as many new fields as prove safe and profitable.

It is not impossible that what has been brought about by the larger companies in the money centers may be extended over wider areas.—Boston News Bureau.

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LADY CIVIL, 2.98, tr. 2.96

BILLY F., 2.12, tr. 2.14

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SOME OF THEM WITH RECORDS AND OTHERS WITH FAST TRIALS.

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NELSON MAYNERS—Twelve head, consisting of Teams, Drivers and Speeders.

C. T. PHILIPPI—Five head, one by Lord Russell and one by a son of Electoneer, both fast.

BLUE RIBBON STABLES—Fourteen Saddlers, Drivers, Actors and Coachers of the best.

A. HUTSON—A Mare by Simmons that is fast, one by son of Bell Boy that can trot fast.

Z. DEWEVER—The fast game mare Mary Ballou, a young one, full of spirit.

JAMES CLARK—Full brother to Fanny Foley, 2.11, and a fine driver.

J. T. DURRANT—Five that are fast.

N. LUCAS—Four chosen ones.

E. H. DICKINSON—Dolly Cat, 2.13, trial 2.00, a race mare.

LAWRENEL & MEANEY—Harry K., the fastest four-year-old pacer in the State, a race

horse.

W. H. HODDY—Filly by Rubenstein, a good one.

J. C. CLEM—Colt by Rubenstein that is fine.

W. B. BETTHAUSE—Walker Smith, 2.14, the best in his class, can trot in 2.10 three times.

A. L. HENNINGER—Douglas V., without better.

E. KNISELEY—The fast Billy F.

PACIFIC HORSES—The fastest.

HARRY K., 2.27, tr. 2.14

HARRY L., 2.27, tr. 2.21

MISS GOLDIE, 2.27, tr. 2.24

CHESNUTT U., 2.27, tr. 2.24

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Maine Farm Notes.

One of the most remarkable seasons experienced for many years is now drawing to a close. For coolness and moisture it has been a record-breaker. The amount of rain which has fallen at any one time has not been excessive, yet the frequency of the rains, fogs and showers has been almost phenomenal. In the springtime it was difficult to get seed planted; in haying time many fields had to be hoed, or not hoed at all; and in harvest time it was impossible to secure all the crops in good condition.

In Kennebec County the hay crop was large, yet suffered more damage in harvesting than any other crop. The grain crop (mostly oats) was very heavy, and, with few exceptions, secured in good condition. The potato crop varied greatly in this vicinity, but not so much in yield as in condition at digging time, some fields rotting but little, while others were badly affected, all the way from fifty to ninety per cent. rotting.

Most of the corn planted in this and adjoining towns was intended for the silo. It is still backward and needs warm, sunny weather to mature sufficiently for that purpose. Some fields have been touched slightly by frost and it will not do to run much more risk before cutting.

The apple crop varies greatly, some orchards bearing heavily and others not at all, or very light crops. In many orchards one will find some trees heavily loaded, while others show very scattering crops. On the whole the season has been a fairly good one, for which we should be thankful.

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WILLIAM L., 2.14, pacer, gray gelding, by Arrowwood, sound and in good condition. William L. started in 1900, won 1st at Dover, N. H., on Sept. 11, in three straight, and reducing his record to 2.14. He finished either second or third in all trials, and was the best pacer in New Hampshire. He is a good horse, and cheap, with all his accoutrements, like sulky, road wagon, etc., to a quick buyer. Price, \$150. Address OWNER, Box 375, Waterbury, Conn.

FOR SALE.

BROWN, stallion, one year old, sired by Baron Wilkes, owned by Baron Wilkes, born in 1900, 15 hands, weight 1,200 lbs.; dam by Lumps, full sister to Luminator, who sold for \$10,000; second dam by Governor Sprague; third dam by Mambo Patchen; fourth dam Valentine (thoroughbred). Sound and gaited. Address BRECKINBRIDGE PAYNE, Lexington, Ky.

FOR SALE.

The great brood mare Hourl, record 2.17 (dam of Senator), 2.14, and a colt, born in 1900, 15 hands, weight 1,200 lbs.; dam by Baron Wilkes, born in 1900, 15 hands; full sister to Luminator, who sold for \$10,000; second dam by Governor Sprague; third dam by Mambo Patchen; fourth dam Valentine (thoroughbred). Sound and gaited. Address BRECKINBRIDGE PAYNE, Lexington, Ky.

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FOR SALE.

Must be sold at once, handsome black stallion, finely bred. Good reason for selling. Address JOHN J. RONAN, 17 Dean St., Adams, Mass.

FOR SALE.

Bay pacing gelding (5), five years old, 15 hands, can show mile in 2.15, quarter 22 seconds. By McEwen; 1st dam by Almont Jr., 17th Bottick's, 2.28; 2nd dam by Binger, 2.04. For further particulars address TOM CROWDER (P.), 400 Church St., Nashville, Tenn.

FOR SALE.

Handsome bay gelding by Nelson's Wilkes; dam by Constellation, by Almont, stands 15.3, weighs 1,000 pounds, perfectly kind and fearless of electric, auto and steam cars. Can trot quarter in 2.10 seconds, and a great rush horse, good tempered. Wilkes has fine ones now in this year. Address, W